

10/076,961

REMARKS

1. Applicant thanks the Examiner for the Examiner's comments, which have greatly assisted Applicant in responding.

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Also, Applicant respectfully requests that the Examiner please take note and that the correct docket number is updated in his records. The Attorney Docket No. is ISAA0047. Thank you.

10 2. **35 U.S.C. §103(a).**

(a) The Examiner rejected Claims 1-2, 7, 15, and 19 under 35 U.S.C. §103(a) as being unpatentable over Holloway *et al* (Holloway) U.S. 5,253,164 in view of Pendleton, Jr. (U.S. 6,253,186).

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Applicant respectfully disagrees.

Applicant is of the opinion that the combination of Holloway and Pendleton does not teach all features of the invention. Specifically, neither Holloway nor Pendleton teach
20 **sequence of states** that a client experiences in one or more episodes of care. The prior art of record does not teach **a probability for a sequence of states** that can be determined from **underlying frequencies of individual state transitions**, as
25 **contained in the model derived from a collection of healthcare data**. The prior art of record does not teach to the extent that the **sequence probability is relatively low**, the information is used to identify facilities that treated the client and may be involved in

10/076,961

fraudulent schemes, etc. The prior art of record does not teach information about the **sequence of states of many clients can be accumulated to develop probability models that describe the probability of any particular sequence of states** for an individual client in one or more episodes. The prior art of record does not teach a level

5 of **aggregated sequence probability information** can be used to identify whether the clients of a particular provider or set of providers show **distinctive probabilities value** which make these sequences appear unusual **with respect to other providers**. The prior art of record does not teach from individual probabilities the **joint probabilities of any particular sequence of states** on a client may be determined, where the

10 sequence of states for a client may look aberrant when compared to a norm, the **norm being derived from aggregated sequences** of other providers or other clients, such that, if a doctor is performing procedures in an odd pattern on many of his clients, relative to other doctors treating similar clients, it might indicate that many of the procedures are perhaps not necessary or are incorrectly performed.

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Support can be found in the Specification on page 7 [0018] to page 8 [0020].

The Examiner stated that Pendleton teaches a process by which neural network (reads "working memory") analyzes the claim line information in the claim file to produce a

20 number or score for each claim line which is viewed as a fraud index or indicator, and that the Examiner considers the number or score for each claim line mentioned above as the information necessary to compute a transition sequence used in calculating a transition metric for transition between states.

10/076,961

Applicant respectfully points out Pendleton teaches a score on a claim line, which is limited to the particular claim only, in isolation. There is no teaching or suggestion in the prior art of record of the concept of a probability of a transition from one state to another, and certainly not of a sequence of transition states, and certainly not of the
5 probability of the sequence of the transition states in one or more episodes.

The Examiner also stated that Pendleton teaches a mathematical method for computing the fraud indicator using averages, weighted averages and threshold values and that it would have been obvious to use mathematical methods for transition metric for each
10 transition between states and transition metric for one or more sequences of states related to the entity.

Applicant is of the opinion that there is no teaching or motivation for such in the prior art of record. Applicant respectfully requests that the Examiner provide evidence of such.
15 Applicant is of the opinion that the Examiner is making a conclusion which is not supported by evidence, but, rather, is using the solution to define the problem, which is improper.

Nevertheless, Applicant appreciates the Examiner's comments, especially with respect
20 to what is recited in the claims, and has amended the independent claims to further clarify the distinction of the claimed invention over the prior art of record.

10/076,961

Therefore, Applicant is of the opinion that Independent Claims 1 and 15 are allowable. Hence, the respective dependent claims are allowable. Accordingly, Applicant respectfully requests that the Examiner withdraw the rejection under 35 U.S.C. §103(a).

- 5 (b) The Examiner rejected Claims 3-5, 8-14 and 16-18 under 35 U.S.C. §103(a) as being unpatentable over Pendleton, Jr. (U.S. 6,253,186).

For Claim 3, the Examiner stated that the above-mentioned healthcare states are utilized to compute the fraud indicator and threshold values and subsequently the transition probabilities sequences from the healthcare states, and that the Examiner
10 considers changes to the mathematical method for computing the fraud indicator such as using healthcare states as parameters would produce transition probabilities sequences of healthcare states.

- 15 There is no basis, without evidentiary teaching or suggestion, that Pendleton's fraud indicator and threshold values leads to an implementation of the probability of a transition from one state to another. Because there is no basis that Pendleton's fraud indicator for a single claim is the probability of a transition from one state to another, there can be no logic to further conclude "subsequently the transition probabilities
20 sequences" without evidentiary data from the prior art of record, of which there is none. Further, there is no logical reason to conclude that the mathematical method would be changed.

10/076,961

The Examiner stated that it would have been obvious ... with the motivation of providing a system which is capable of processing claim data and identifying a potentially fraudulent provider or supplier. However, there is no motivation for using the concept of probability of transition between states and probabilities of sequences of transitions,
5 without the benefit of hindsight, which is improper.

Nevertheless, Applicant appreciates the Examiner's comments, especially with respect to what is recited in the claims, and has amended the independent claims, except for Claim 8, to further clarify the distinction of the claimed invention over the prior art of
10 record. Regarding Claim 8, in view of all arguments hereinabove, Applicant is of the opinion that Claim 8 is not taught, is not suggested, and is not motivated by the prior art of record, as the prior art of record does not teach individual transition probabilities based on frequencies counts of transition from one state to another. Applicant is not claiming a lookup table per se.

15 In view of the argument hereinabove and of the amendment to the independent Claims 3, and 9, Applicant is of the opinion that Claims 3, 8, and 9 are in allowable condition. Therefore, the respective dependent claims are in allowable condition. Accordingly, Applicant respectfully requests that the Examiner withdraw the rejection under
20 U.S.C. §103(a).

4. It should be appreciated that Applicant has elected to amend the Claims solely for the purpose of expediting the patent application process in a manner consistent with the PTO's Patent Business Goals, 65 Fed. Reg. 54603 (9/8/00). In making such

10/076,961

amendment, Applicant has not and does not in any way narrow the scope of protection to which Applicant considers the invention herein to be entitled. Rather, Applicant reserves Applicant's right to pursue such protection at a later point in time and merely seeks to pursue protection for the subject matter presented in this submission.

10/076,961

CONCLUSION

5 Based on the foregoing, Applicant considers the present invention to be distinguished from the art of record. Accordingly, Applicant earnestly solicits the Examiner's withdrawal of the rejections raised in the above referenced Office Action, such that a Notice of Allowance is forwarded to Applicant, and the present application is therefore allowed to issue as a United States patent. The Examiner is invited to call to discuss
10 the response. The Commissioner is hereby authorized to charge any additional fees due or credit any overpayment to Deposit Account No. 07-1445.

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Respectfully Submitted,


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